

# THE MINING AND METALLURGICAL JOURNAL.

FORMERLY THE PACIFIC COAST BULLION.

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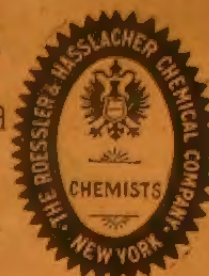
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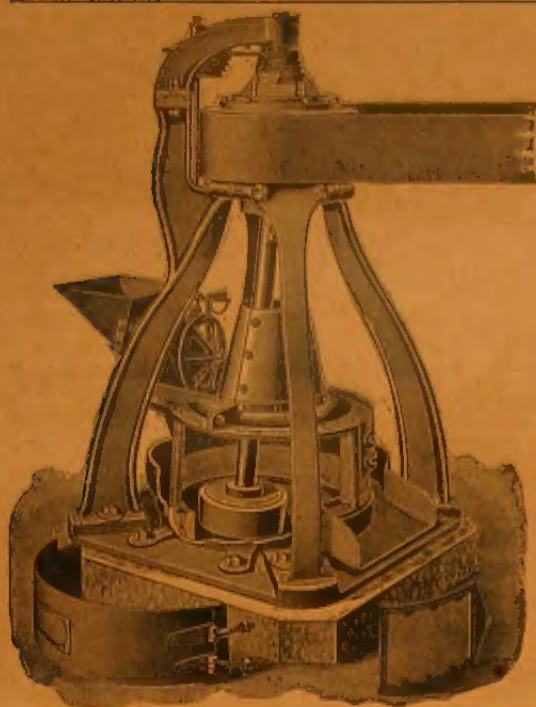
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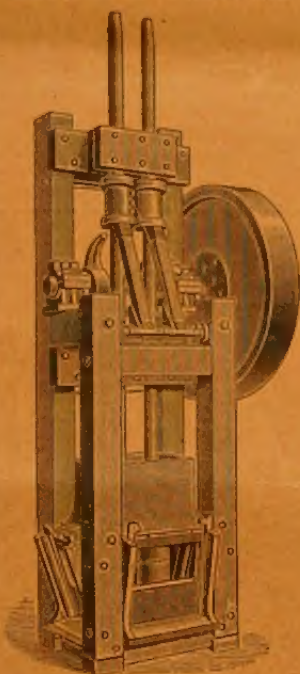
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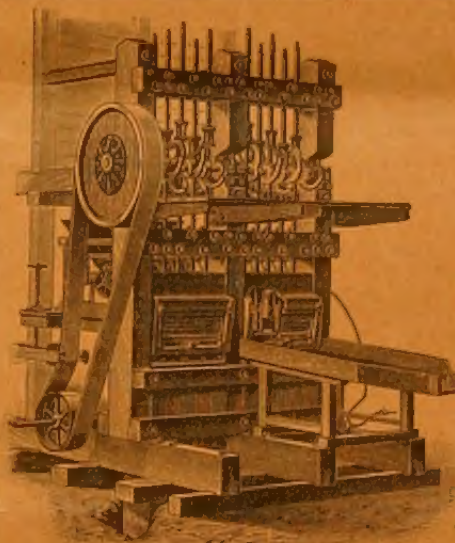
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GOOD WORK TO BE CONTINUED.

A review of what has been accomplished since the organization of the association will no doubt be a surprise to many who have considered that body as something that existed as a matter of course, but for no particular reason except to bring the miners of the state together once a year. Ex-Gov. H. H. Markham called the attention of the legislature to the hydraulic mines and suggested a thorough investigation in his inaugural address in 1891. His idea was that the federal government should bestow the same attention to mining as they had to irrigation. Resolutions were passed by the legislature asking Congress to appoint a commission to be sent to California to thoroughly investigate the hydraulic mines and rivers, and to take such action as they thought necessary to enable the hydraulic mines to resume. In the meantime the construction of impounding dams for debris was recommended by the act of Congress in 1888. In 1891 Thomas B. Everett, a miner of Auburn, Placer county, recommended the feasibility of calling a convention of the miners of Placer county to devise means by which the hydraulic mines could resume operations. This Placer county convention issued a call for a state mining convention, setting forth the condition of the hydraulic mining industry and asking for assistance. Mr. Chas. G. Yale being the only representative from San Francisco, the work of interesting San Francisco people fell on him. When he returned to San Francisco a meeting was called and sixteen representative men met and discussed the situation, which resulted in committees being appointed to arrange for the state convention.

In January, 1892, the State Miners' Convention was held, and all the counties in the state interested in mining were represented. Reconciliation between the miners and the

A State Miners' Association was then organized with branch associations in the different counties interested. The Chamber of Commerce and Board of Trade of San Francisco endorsed the appeal of the miners to Congress.

Then followed a long and expensive struggle before Congress to get the necessary laws. The Caminetti bill was made the subject of heated discussions. The bill, after suffering many amendments, was finally passed, although in a shape not entirely satisfactory to the two contending factions.

The State Legislature, which had previously passed a resolution asking Congress to pass the bill, then enacted a state law in accord with the Congressional law.

In order to understand what the struggle meant for the miners, it may be stated that under the famous Bloomfield decision, all the hydraulic mines in the drainage basins of the San Joaquin and Sacramento rivers were absolutely prohibited from working and were all closed down by injunctions of the courts, thus cutting off not only the product of the gold from this class of mines, but throwing thousands of men out of employment. By the work of the State Miners' Association the Caminetti law passed, which, under certain restrictions, permitted all these mines again to resume. The restrictions were that each mine must, at its own expense and under the supervision of a government commission of engineers, impound its debris and prevent its getting into the navigable streams or the adjacent lands. Since the law was passed between 150 and 200 of these mines previously closed down for years, have resumed operations, having built impounding works to hold back the debris. It is true the output is to some extent restricted because they cannot wash as much gravel behind barriers as when they could do as they pleased with their tailings, it being necessary to let the muddy water settle in the reservoirs. Still, none of these mines could work before the law was passed, and not all can do so if they do not build restraining works to the satisfaction of the government engineers.

This was a great triumph for the miners. The anti-debris men could find no fault with such a law because it looked out for their interests as well as those of the miners. It is only the rabid anti-miners who still object. The commission has carried out its work with impartial fairness, and when a mine could work without injury to any one, it was permitted to do so. Where the conditions were unfavorable for the construction of proper dams, no permits were issued to that particular mine and it could not operate. To mine by the hydraulic method in the drainage basins of the Sacramento or San Joaquin rivers, one must now have a permit from the California Debris Commission.

The next fight the Association had on its hands was to prevent the railroad companies including in their grants any mineral lands. For many years the companies had been patenting lands supposed to be agricultural, but which were not classified, and of course carried mineral also. This had been going on so long that the companies objected to any interference with what they supposed were their vested rights. This particular fight of course had to be made in Congress and a bill

was drawn and sent on. In Montana and Idaho a Commission was classifying all the lands before patent was issued to the railroad companies, and California sought to have the provisions of the Montana law applied to this state. As may be supposed, the railroad companies opposed this measure and were finally successful in defeating it. What the Miners' Association sought to have done was to get the appointment of a commission, the duty of which should be to classify all lands sought to be patented to the railroad, and eliminate from the patent any lands mineral in character. This worked no hardship whatever to the railroad companies, because they were given lieu lands elsewhere, while at the same time the mineral domain of the country was kept for the prospector and miner for whom it was intended. A great deal of money had to be spent in this fight because it was necessary to have attorneys sent to Washington to look after the interests of the miners before Congress. The Pacific Coast delegation was solid for the measure, and it was passed by the Senate and agreed to by the House. At the last moment, however, by a trick of parliamentary practice, the speaker of the House succeeded in practically killing the bill for that session. At the coming session the bill will again be considered, but meanwhile the railroad companies have succeeded in patenting some hundred thousands of acres of lands which have not been classified, and in doing this they have of course included mineral lands. Once such land is patented to the railroad the mineral goes with it and the prospector must buy from the railroad instead of the government.

It was not until the miners of the State organized as a body that anything was accomplished in their interest, the individual contests of the hydraulic miners against the powerful Anti-debris Association were always unsuccessful.

The old miners' association which undertook the first fight was not at all like the new one, as it was subject mainly to the will of an individual who managed it. The present State Miners' Association has a strong executive committee with representatives in every county in the State.

Among other things accomplished by the association since it began its work is the obtaining of two important appropriations for the improvement of the rivers to prevent the debris already in them from coming farther down and injuring their navigability. The State Legislature appropriated the sum of \$250,000 for this purpose, which was, however, conditional on Congress appropriating a like sum for the same purpose. The last Congress did appropriate this sum, so that now both appropriations are available and work has been commenced by the Government engineers who have the expenditure of this money in their charge.

The association still has on its hands the fight on the Mineral Land bill, as it is called, which is that to prevent any further encroachments on the mineral domain on the part of the railroad companies. This fight will be carried on in the coming Congress on the same lines as before. The State of Oregon, and perhaps Washington, will be included this time, as they have the same conditions to contend with in those States as we have here.

There are several other measures looking to amendments to the mining laws and kindred subjects which will come before the next convention of the Association. The object of the annual conventions is to learn the wants



of different sections of the State, and then all hands stand in to accomplish what is wanted.

Secretary Sontagg states that good, strong delegations to the convention have been appointed by the different county associations, and that the coming convention will be much larger than any of its predecessors. Special rates have been obtained from the Southern Pacific Railroad Company for the delegates.

One of the main things accomplished by the Miners' Association has been that it has brought the mining industry prominently before the people of the State. It has overcome the bitterness which was for a long time felt against the miners of the mountains and its course has completely disarmed the valley opponents of mining because everything has been done with a spirit of fairness and consideration of the rights of all concerned.

There is no longer any antipathy to the miner displayed. The starting up of so many mines which had been long idle has repopulated many of the small mining towns of the mountains, and given the farmers local markets for their products.

Altogether the association has done good work for the miners and the people of the State. It should be financially and morally supported by all the mining communities and all the counties should maintain organizations as branches to the main association.

#### THE CALIFORNIA MINERS' CONVENTION

As the date for the convention of the California Miners' Association approaches, the interest in that representative body increases. Times have become harder and competition in all lines of business has increased. While this state of affairs has existed in general business, the mining industry has been steadily growing, particularly gold mining. The fact is generally becoming known that gold mining is the only industry in which competition does not lower prices; and the opening of a new mine does not cause the price of the product to fall in value.

California stands at the head of the states as a gold producer, and the undeveloped and unexplored territory is so immense that it can reasonably expect to retain its lead. All the climatic influences are so far superior to any other like extent of mining territory that the future is assured. The early history of gold mining in California plainly demonstrated the value of the lodes and deposits from which the gold had simply washed which caused such a rush to this coast from 1849 to 1859.

California has forty counties which are engaged in mining, although most of the precious metals are found in thirty-three, and from Del Norte, Siskiyou, and Modoc, the three counties which bound the state on the north, to San Diego, which is the most southerly county, mining is in a flourishing condition and growing as no other industry is.

The territory which lies between the northern and southern boundaries of the state, is over eight hundred and fifty miles in length and contains mines which have been profitably worked since the first discovery of gold.

The great northern lode, which extends nearly one hundred and fifty miles in length, passes through Sierra, Calaveras, Amador, Plumas, Tuolumne, El Dorado, Nevada, Shasta and Placer counties.

In California the Utica, Kennedy and Rawhide mines (although they are among the greatest gold mines in the world), cause little comment; but if they were in Alaska or South Africa there would be such an excite-

ment in mining circles in London and other foreign investment points as has never been known before.

It is very difficult to give figures concerning the number of mills, mines, and miners in the different counties of California, but the following estimate will be found as accurate as can be obtained, considering the migratory character of miners and the fact that mills are constantly being moved from one place to another:

NAMES OF COUNTIES	Number of Miners	Number of Mines	Number of Stamp Mills	Number of Stamps	Capacity in Tons in 24 Hours
Alpine.....	20	19	3	68	130
Amador.....	890	115	33	587	995
Butte.....	711	76	11	108	332
Calaveras.....	1200	261	53	718	1880
Colusa.....	26	21	...	...	...
El Dorado.....	810	270	62	692	1220
Fresno.....	165	24	10	73	139
Inyo.....	240	60	21	127	223
Kern.....	700	162	21	138	280
Lassen.....	50	19	5	40	88
Los Angeles.....	175	17	7	30	50
Madera.....	127	135	7	120	210
Mariposa.....	527	125	22	242	434
Mono.....	215	45	12	159	315
Nevada.....	1570	182	57	766	1730
Placer.....	800	107	27	260	680
Plumas.....	550	56	23	312	560
Riverside.....	900	145	22	126	210
San Bernardino.....	1000	160	24	149	490
San Diego.....	750	60	17	219	750
Shasta.....	1200	115	24	294	645
Sierra.....	600	86	16	242	600
Siskiyou.....	1500	412	40	255	624
Sonoma.....	300	14	1	10	32
Trinity.....	760	215	16	100	235
Tulare.....	70	35	2	10	26
Tuolumne.....	1000	300	44	462	975
Ventura.....	25	5	1	10	33
Yuba.....	60	12	5	34	94

making a grand total of 16940 miners, 3224 mines, 586 stamp mills, and 6351 stamps, with a capacity of 13877 tons every twenty-four hours. The number of miners in the state has been placed as high as 20,000 by some authorities. The production of gold and silver by counties is also of interest, and is here given as taken from the California state mining bureau, Bulletin No. 8. Chas. G. Yale, who completed the figures, is one of the best known statisticians in the United States, and afforded us valuable assistance in obtaining data for this article.

#### GOLD AND SILVER PRODUCTION BY COUNTIES, 1895.

	GOLD.	SILVER.	TOTALS.
Amador...	\$1,391,929.40	\$ 1,089.00	\$1,393,018.40
Butte.....	697,260.85	8,935.53	706,196.38
Calaveras, 1,717,916.14	77.00	1,717,993.14	
Del Norte..	8,250.00	.....	8,250.00
El Dorado,	700,101.31	447.68	700,548.99
Fresno.....	47,249.00	.....	47,249.00
Humboldt,	92,635.20	.....	92,635.20
Inyo.....	92,142.28	188,329.23	280,471.57
Kern.....	231,433.31	46,064.28	277,497.59
Lassen.....	25,000.00	.....	25,000.00
L. Angeles,	23,330.00	.....	23,330.00
Madera.....	162,323.74	.....	162,323.74
Mariposa,	216,622.39	7.07	216,629.46
Merced.....	1,500.00	.....	1,500.00
Mono.....	552,690.54	84,910.37	637,600.91
Nevada.....	1,789,815.66	400.00	1,790,215.66
Orange.....	144.00	.....	144.00
Placer.....	1,599,634.79	5,272.53	1,604,907.32
Plumas.....	602,951.05	271.52	603,222.57
Riverside..	285,106.00	2,550.00	287,656.00
Sacramnto	145,872.75	.....	145,872.75
San Bdo...	131,360.00	219,410.30	350,770.30
San Diego,	344,307.57	600.00	344,907.57
S. Luis Ob.	3,000.00	.....	3,000.00
Sta Barbra	4,000.00	.....	4,000.00
Shasta.....	781,696.32	28,417.20	810,113.52
Sierra.....	694,469.67	106.96	694,516.63
Siskiyou...	950,006.43	177.30	950,183.73
Stanislaus,	26,481.50	.....	26,481.50
Trinity.....	1,166,745.13	1,257.28	1,168,002.41
Tuolumne,	666,754.15	312.62	667,066.77
Tulare.....	16,320.00	.....	16,320.00
Yuba.....	111,482.34	.....	111,482.34

a total of \$15,334,317.69 in gold, \$599,789.70 in silver, and \$15,934,107.39 gold and silver. Of the \$599,789.70 produced in silver, \$456,953.81 was obtained in five of the counties in Southern California: Inyo, Kern, Riverside, San Bernardino, and San Diego. While gold continues to be the largest mineral product in value, the annual value of iron metallic substances has now reached \$1,348,280; hydrocarbons and gases \$1,404,321, and structural materials \$2,713,755. There were 36 other metallic substances, besides gold and silver, produced in 1895, of which we give a partial list: antimony \$1,435.00; asbestos \$1,000; borax \$595,900.00; copper \$21,900.50; gypsum \$51,014.00; lead \$49,364.40; magnesite \$17,000.00; manganese \$8,200.00; mineral paints \$8,425.00; platinum \$900.00; quicksilver \$1,337,131.00. The petroleum output was 1,245,339 barrels, valued at \$1,000,235.00. The entire mineral product of the state for 1895 reached \$22,844,664.29. One hundred and fifty-seven hydraulic mines are working under permission of the United States debris commission. Two hundred and thirty-three applications for permission to work were made by hydraulic mines, but only one hundred and fifty-seven were granted. If the hydraulic mines in all parts of the state were allowed to commence operations again, the gold output would soon be doubled. California, in 1852, produced \$81,294,700.00, which was nearly sixty-two per cent of the world's production for that year.

The total output of gold in California from and including 1848 to January 1st, 1896 has reached the enormous amount of \$1,265,217,217.00, or about twice the amount now in circulation in the United States, and thirty-one per cent of the world's supply at the present time. California is an empire in itself and the miners are beginning to understand what an important item their product is to the state. Nature has been kind to California and has done as much for the miner as for the agriculturist, with no severe winters, with an abundance of timber in all the northern counties, and oil in the south, with the San Joaquin, Merced, Yuba, Feather, Stanislaus, American and Mokelumne rivers in the north, and the Kern, Mojave and Colorado in the south to furnish power and with the accessibility of all the mining territory the only wonder is that we have any portion of the state open to location and that we have not 50,000 miners instead of less than 20,000. However, this state of affairs will not last long as the enterprising foreigners are eagerly grasping the opportunity of investing money in a country which has an enlightened and stable government. Mining investments have not been as profitable in some of the distant foreign countries as the public have been led to believe and the conservative foreign investor turns with satisfaction from governments which are on a war basis and where he is subject to confiscation at any time, to California where every influence is in his favor. The trouble between the agriculturist and miner caused by the debris from the hydraulic mines partially obstructing the rivers, necessitated a temporary suspension of mining operations but the miners took hold of the quartz lodes and still further proved the vast mineral wealth of the state by leaving one branch of mining on one side of the canyon and taking hold of equally rich ground on the other side. California labors under the difficulty of being able to make only part of the mining territory productive on account of not working the immense auriferous cement and gravel deposits by hydraulic power. All these difficulties will in time be overcome



and California people should realize that they have right at home the greatest mines, in the most favored clime and under the best government to be found in the world. And it is to their interest to aid and encourage the miners in every way; and we hope the people of San Francisco will do everything in their power to make the coming convention of the California Miner's Association an event long to be remembered.

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The California State Mining Bureau has also issued eleven Bulletins as follows:

Bulletin No. 1. Desiccated Human Remains, W. Anderson
Bulletin No. 2. Mine Timbering, second edition, W. H. Storms.
Bulletin No. 3. Gas and Petroleum, W. L. Watts.
Bulletin No. 4. California Fossils, second part, J. G. Cooper.
Bulletin No. 5. Cyanide Process, second part, D. Scheidel.
Bulletin No. 6. California Mill Practices, E. B. Preston.
Bulletin No. 7. California Mineral Production, '94, Chas. G. Yale.
Bulletin No. 8. California Mineral Production, '95, Chas. G. Yale.
Bulletin No. 9. Mine Drainage, Pumps, etc., Hans C. Behr.
Bulletin No. 10. A Bibliography relating to Geology, Palaeontology and Mineral Resources of California, A. Vodge.
Bulletin No. 11. Oilfields of Southern California, Part I, W. L. Watts.

NOTE.—The thirteenth Report will be issued about December 1st, 1896.

The California State Mining Bureau was established by Act of the Legislature in 1880, mainly through the instrumentality of the late Jos Wasson of Mono county, a member of the Legislature, and an enthusiastic advocate of the mining interests. Governor George C. Perkins appointed Henry G. Hanks as the State Mineralogist and the Bureau was established on Pine street—the nucleus for a museum having been donated by the State Geological Society. The earlier reports were not very voluminous and related principally to minerals, specimens, etc., there being no Field Assistants to visit the mining regions and report on mining properties. Upon the resignation of Mr. Hanks, Mr. Wm. Ireland, Jr., was appointed and served several years, when he was in turn succeeded by the present State Mineralogist, Mr. J. J. Crawford, of Placerville.

The museum has gradually but steadily enlarged, until it is now one of the finest collections of ores, mineral, etc., in the United States. Nearly everything has been donated—few purchases having been made, owing to lack of funds. The library has also increased gradually, and consists mainly of technical works, reports, etc., relating to mining, metallurgy, and kindred subjects. The scope of the work of the Bureau has been enlarged of late years, and its publications have become more numerous and valuable. This is due, to some extent, to the system of Bulletins authorized by the revised organic Act of the Bureau, passed by the Legislature March 23, 1893. A biennial Report is published, mainly descriptive of individual mines, and the progress of their development—the result of the researches of the Field assistants who visit all the mining counties of the State, and report on all sorts of mines, quarries, etc. The Bulletins are special monographs on such subjects as "Mine Timbering," "Gold Mill Practices," "Oil Lands," "Cyanide Process," "Mine Drainage," etc. These, as well as the Reports, are in great demand by the mining community. Complete annual statistics are also collected as to the amount and value of all mineral substances produced in the State, which serve as an excellent and reliable basis of comparison of progress in the various mineral industries of California from year to year.

The number of visitors to the mineral collection or museum is between 50,000 and 75,000 annually, and the number seeking information and reference in the library is about 10,000 a year. From 1,000 to 2,000 letters of inquiry are answered every year, and from 2,000 to 3,000 specimens are examined, reported on, and identified, to determine their character or value. In the library, in addition to the books, the leading mining papers and those published in the mining districts are kept on file for reference.

The Bureau was established to record from year to year the progress of the mining and mineral industries of California; to investigate the geological conditions under which the minerals of the State are found, and to afford accurate but gratuitous information on all kindred subjects. The researches of the Field Assistants include not only the minerals and geology of the mountains, but attention is also paid to the water, oil and gas-bearing formations of the valley lands.

It is well that Californians should be aware of the advantages that the State places at their command through the Mining Bureau. Connected with it is a well-appointed laboratory, with a competent chemist and determinative mineralogist. No matter how poor the man is who finds a mineral in California and wants

to know what it is, all he has to do is to leave it at the Bureau or forward it by mail or express, and it is examined without charge and a letter sent stating what it is and what its uses may be. The Bureau is not allowed to make quantitative assays—that is, say how much gold or silver, etc., may be in the rock, but it determines the character of the mineral.

California is the only State in the Union which has just such an institution, though some others have State Geologists who make reports; but this is a real bureau of information for the mining community.

The Mining Bureau is really doing good and efficient work, and should not only be properly maintained, but its possibilities should be increased by more liberal appropriations and financial support, that it may extend its work in the direction of further geological researches, not now possible with the available force. Its publications are not only in demand in our own State, but all over the United States and all parts of the world where mining is carried on. A charge is made for the Reports and Bulletins sent out of the State for individuals; but all the publications are free to citizens of California.

In this same number is given an abstract of the contents of the various reports issued by the Bureau, which will be found useful for reference. A list of the Bulletins is also given. All but two of the Reports are now out of print—the editions being exhausted—these are the Ninth and Eleventh.

The dissemination of this information by the Bureau has been of wonderfully great assistance to the mining industry of our State. Not only has it helped our own miners directly in the matter of accurate information, but it has also been the means of attracting capital to our mining field, by describing the variety and richness of our mineral resources.

## CORRESPONDENCE

## CALIFORNIA.

GARLOCK, KERN COUNTY,  
Oct. 28, '96.

EDITOR JOURNAL:—The miners here and at Goler are getting up a petition to have Mr. Edelsten appointed to represent the mining interests of Southern California as our delegate at the Convention of the California Miners' Association, which meets in San Francisco, Nov. 10.

J. McKiernan has sold his steam stamp mill to some parties from Visalia, for \$1700 cash. The purchasers are wealthy capitalists, and propose to at once double the capacity of the mill and add a cyanide plant. Mr. McKiernan has gone inside to purchase another mill of ten stamps, which he will erect here.

Mr. Henry, of Los Angeles, is putting in a 10-stamp mill on the next lot east of the steam stamp mill, and another party has ordered the lumber and material for a 10-stamp mill, to be built east of Mr. Henry's mill. This will give us four mills for custom work, beside the small mill at Mesquite Spring, one mile west, and the mill at Kane Springs.

Over \$5,000 in gold dust and bullion left Garlock this week in such a way that lone highwaymen would have some trouble in getting possession of it.

Two new hotels are being built, both of stone—one by Mr. A. Martin and the other by C. B. Doty.

The Mojave and Garlock telephone line is soon to be extended to Randsburg, along the south side of the street which is being laid out in a straight line between the two places.



The Desert Bank is being organized here, and will soon begin the building of a stone block, two stories high, on the southeast corner of Garlock and Randsburg streets.

A great many miners are leaving for their homes inside, in order to exercise their right of elective franchise. When election is over, and all but a corporal's guard of these honest, self-sacrificing office-seekers have been snowed under, then business will commence in earnest, and Garlock, the natural center of this mining region will hum with busy humanity, and the quartz mill will grind and roar, as they save the yellow metal from thousands of tons of the richest rock on this continent.

The smoke of the election, "two for a nickel stinkers," will be replaced by the smoke of burning coal. This reminds me that a company is now being formed at Los Angeles to prospect, develop and mine the Heald coal field north of Garlock.

Heavy rain, sleet and snow have interfered this week with dry washing where the diggings are shallow.

Lumber is hard to get at any price, and when a big 16-mule load does drive in, it is quickly taken at fancy prices, regardless of knots, bark and woodpecker holes.

OLD CORRESPONDENT.

#### Picacho Gold Mines

The Golden Dream Company has purchased the Golden Dream, the Alcyon, the White Gold, the Noonday, and the Little Frank groups of mines, 25 in all, with their mill sites—situated on the Colorado River, in the White Gold Basin, Old Picacho Mining District, in San Diego County, of Col. D. K. Allen, for \$100,000. The company's new 10-stamp prospecting mill was shipped Saturday to the mines.

The veins on the Noonday show up 8, 32 and 81 feet of ore respectively, that will average from \$5 to \$10 per ton in free gold in the mill.

The vein on the Mi Querida mine is pierced by a tunnel 53 feet in length, crossing the vein, and showing but one wall, with ore averaging \$10 per ton in free gold.

The Oro Blanco vein, 40 to 100 feet wide, shows good \$5 to \$7 per ton ore. This vein is cut by a canon, from 40 to 100 feet in depth, showing the ore body on both sides of it.

The Alcyon vein is cross cut by a tunnel, 50 feet in length, with but one wall in sight, showing \$6 ore its entire length.

All of the development work done on these mines is the result of Col. Allen's efforts during the present summer—altogether 10 shafts, from 10 to 30 feet in depth; 4 tunnels, 20, 50, 55 and 56 in length, and 51 cross cuts, from 10 to 82 feet in length, on the various mines of the company. X. X. X.

#### COLORADO.

BOULDER, Colo., Oct. 13, 1896.

EDITOR JOURNAL:—Some of the most important mining transactions of the season were consummated a fortnight ago in this county by Bert Langridge and the writer for a London, England, syndicate. The property is the Emancipation-Western Slope group of four mines, consideration \$125,000, first payment made to E. J. Temple who had control of the mines. The peculiar part of the transaction lies in the fact that the mines have not been operated for ten years to any extent, owing to the fact that the lodes crossed almost at right angles, and each party claimed the exceedingly rich sylvanite that was found in

this crossing. A lawsuit which took the case through all the courts resulted in the loss of the property to the original owners, which was taken in by the several attorneys for fees in trying the case.

The new company has started work by tearing down the old building, which will be replaced by a much larger shaft house and hoisting machinery, when a thorough system of development will be inaugurated.

The following lots of telluride ore were sold last week: John Rose & Son, 150 pounds brought \$27.65 per pound, while the smelting ore ran 50 ounces gold per ton. This amount was the result of one month's work of two men from the Golden Age mine, Jamestown.

Doc and Will Sherman and John Dube saved 51 pounds of selected ore that yielded 36 ounces of gold, and 5000 pounds that netted 26 ounces of gold per ton. These men took out the above ore in one month from a piece of ground which they have been leasing in the Golden Age mine.

Walt Clemons and the Evens brothers received a check for \$1200 for a batch of ore from the Buena mine, Jamestown, which averaged \$500 per ton. Their selected ore, 80 pounds, sold for \$7 a pound.

A phenomenal strike was made last week in the Independence lode, showing large quantities of free gold in white quartz, which make exquisite cabinet specimens. The mine is leased and bonded by Col. Downs, John Morrow and Henry Orr, who are making great money, and in two months expect to take up the bond and pay off the price of the mine with the ore taken out of the mine.

The B. & M. group of mines, situated at El Dorado, was sold Saturday by T. J. Crone to Thomas Stanley, Dr. Henry B. Hayden and C. M. Kendall, of Colorado Springs, and the first payment made. The property will receive a great impetus from the new owners, who will erect handsome machinery and do thorough development work during the winter months, and commence shipping to the Denver and Boulder smelters in the spring.

Marcus Ruthenberg, a member of the Sulphide Reduction company of Denver, desires to purchase mining property in Ward district, which is the great sulphide camp of Boulder county, and was in this city for that purpose last Friday and Saturday.

It has been the custom of this company to lease and develop mines that were adapted to the sulphide process, paying a liberal royalty therefor. The mines that he was anxious to procure were not open to a lease and bond, neither did the owner desire to sell unless the spot cash was paid and they were able to do all necessary development work.

Two eighty horse-power steel boilers were taken to the great Dew Drop mill yesterday, and will be placed in position at an early date. The present boiler capacity is inadequate to furnish steam for the machine drills being used by the company, and for running the huge concentrating mill machinery. During the time necessary to set the boilers the mill will remain inactive. This mine has immense ore bodies exposed in the tunnel level, which is a thousand feet long, while a parallel vein about thirty feet north shows four feet of solid sulphide ore that averages about \$65 per ton. The two veins are operated on through the same tunnel by crosscuts run at intervals where ventilation can best be attained and the ore mined to the best advantage.

Our country is showing up finely; its mining industry was never so bright and profitable; the output of ore is more abundant

than at any period in the history of Boulder as a mining section; and more capital has found its way into our mines during the past twelve months than for twelve years previously. Mining in Boulder county is a grand success. WM. M. RULE.

## Miscellaneous Mining News.

### CALIFORNIA.

#### AMADOR COUNTY.

The Dennis Kelley mine has laid off some of its men, while waiting for machinery which is expected daily. When this arrives a full force of men will be put to work. The prospect for the future is said to be good. Wm. G. Hawckett and A. H. Ackerman, who were interested in the mine, returned to Oakland last week.—*Republican*.

The miners in the Anita are cross cutting the ledge at the 500 level. They are in about 85 feet and indications are that the ledge will be encountered at about 100 feet. Their future course will depend upon what is revealed when they thoroughly prospect the ledge. If it is of sufficient thickness and value the company will erect a mill and operate it while continuing sinking.—*Ledger*.

French capital is seeking opportunities for further investments on the mother lode. At present Georges Grimaux, the accredited representative of a syndicate of Paris bankers, is making a preliminary examination of properties in Amador county. Thence he will go to Calaveras, Tuolumne and Mariposa. He will be followed in November or December by mining engineers, who will report on such propositions as Grimaux may lay before them.

An electric system is now in full working order at the Bellweather mine in Amador county, and the engine house and other buildings and the mouth of the shaft are now fully lit up by the Amador County Electric Railway and Lighting Co.

#### BUTTE COUNTY.

Statistics show that mining for gold in Butte county has nearly doubled this year, both in the number of mines operated and the number of men employed, over that of last year, notwithstanding that last year's increase was greater than for any single year for the previous 20 years. Uncovering ancient river channels and opening up new quartz mines are the chief directions taken by the new operators.—*Record*.

Reduction works will soon be opened in Oroville. It will contain two stamps with concentrators and everything complete for sampling and testing ores.

The Faulkner group of mines at Forbestown, Butte county, have been bounded by capitalists from Texas, who will soon proceed to open them up and place them in working order. The Forbestown mines are all on the same general lodes, and capital and enterprise will, in time, make that locality the equal of any quartz mining locality in the state.

#### CALAVERAS COUNTY.

One week ago last Thursday, pursuant to previous announcement, a meeting was held in



the Court House in San Andreas for the purpose of organizing a branch Miners' Association. Such an organization was affected at the Gwin Mine a short time ago, and it was principally through the efforts of the miners of that end of the county that the organization was instituted here. F. F. Thomas, superintendent of the Gwin mine, acted as president and M. B. Kerr of the South Poloma as secretary. The secretary read a number of communications and briefly stated the object for which the organization was formed, viz., the segregation of mineral lands and the protection of the mining industry generally. Seventy names were signed to the roll to begin with. Every branch organization is entitled to one delegate to the national convention which convenes in San Francisco, to every ten members. It was moved and carried that the delegates to said convention be instructed to exercise their endeavors with a view to having a secretary or commissioner of mining form a part of the National Executive Cabinet. Upon motion the members of the organization were authorized to solicit members and forward their names along with the delegates selected for every ten to Secretary Kerr at the Gwin mine, who would attend to forwarding them to the national organization. Speeches were made by different members.

The shaft at the Gwin mine is now down 1412 feet. The rock in the bottom is very hard and slow progress is being made. The station timbers for the 1400 level are in place and after the sump is completed, the station will be cut and a crosscut run to the ore body, about 65 feet east of the shaft.

The 1200 and 1300 foot levels are in good shape to commence the taking out of ore. The frame work for a 12x16 crusher, Knight & Co's make, is being put up and everything is being gotten ready for the mill.

Chas. Mitchell of Sutter Creek is laying the pipe from the mill to the reservoir. The framing of the battery is nearly completed. The mortar blocks could not be had in one piece, so they had to be made of two pieces. They are butt redwood, 30x30 inches and 9 feet long.

The twenty stamp mill at the Boston mine, near Mokelumne Hill, has been increased by ten additional stamps. It is claimed that an immense amount of low grade ore is in sight.—*Prospect*.

The Milton Consolidated mine, of which mention was made last week as being lately incorporated by Oakland parties, and the officers of which are: Jacob Greenwood, president; F. D. Adams, vice-president, and J. P. Oliver, secretary, is situated about four miles south of Angels Camp, and directly west of Carson Hill. The different branches of the mother lode seem to come together there, forming one immense vein. Scarcely a year ago nothing was heard of this locality. Now the Carson Creek Mining Company, whose property joins the Milton Consolidated on the south, have one ore body forty-seven feet wide, with forty stamps continuously at work. The Milton people are running a tunnel from Carson Creek which will be 700 feet long and give 700 feet of backs. They have a shaft sunk on the vein fifty-seven feet, the last fifteen feet being in sulphuretted ore. One peculiar feature about this shaft is that there is a very strong flow of water coming into it so impregnated with sulphur as to make it unfit for use, and in the Carson Creek company's shaft, 700 feet lower, and but a short distance to the south, there is no water at all.—*Enquirer*.

#### EL DORADO COUNTY.

The El Dorado County Miners' Association which was organized in 1892 with 300 members, has been revived and a strong delegation will be sent to represent the county at the convention of the California Miners Association in San Francisco Nov. 10th.

F. E. Brown, the civil engineer who was at one time connected with the Grand Victory mine, and who left this county to investigate some mining property in other parts of the state about a year ago, returned to Placerville last week and will probably remain here some time. He is now introducing a new amalgamating device, invented by his brother, W. L. Brown, or rather he is seeking an opportunity to use the machine on tailings that have been worked by the best processes now in use. It is probable that the machine will be set up permanently at one or more of the mines in this county. The machine is very simple and acts upon the principle of bringing the pulp containing the fine gold that is usually lost repeatedly into contact with amalgamating plates as long as may be necessary to secure amalgamation. It consists of a tank having curved sides on which amalgamating plates are laid. A pipe leads through the tank at the bottom between the plates and conveys the gold bearing pulp mingled with water, which is forced into the pipe by means of a centrifugal pump operated by any convenient power. The pipe is perforated so that by the action of the pump, currents of pulverized quartz and water containing the gold are forced continually against the amalgamating plates, the water being pumped in and out of the tank in this way till the quartz is divested of its valuable contents by amalgamation when a new charge is treated. It will be seen that the duration of this process is entirely under the control of the operator, and can be varied at very trifling expense to suit the material. There are also facilities for treating rebellious ores by electrical or chemical in this tank process which cannot be applied so well by other methods. It seems to be a genuine improvement in the methods of handling gold ores.—*Republican*.

Work on the Big Sandy is being pushed ahead with dispatch on some undeveloped portions of the lode, which so far seems to exceed the prospects found in the older workings.

Sinking continues at the Amazon. They have reached a depth of 150 feet, and are pushing the erection of the steam hoisting plant as fast as possible, brick and stone being already on the ground for the boiler.

At the Hardscrabble the old works have just been pumped out. A small crew are now prospecting this once famous, though but little developed claim, which, at a depth of less than 100 feet ranked as one of the old-time bonanzas.

Last Saturday the final sale of the Lady Emma took place, the mine and machinery going to H. S. Morey.—*Gazette*.

#### FRESNO COUNTY.

The old copper mines in eastern Fresno county are being reopened and a number of valuable "strikes" have recently been made.

The Petroleum Mining and Smelting Company of Los Angeles has a force of eighteen men at work on its claim, four miles east of Letcher. The company has sunk a shaft to a depth of a hundred feet, which has penetrated many fine ore bodies. The main ledge is from nine to twenty-one feet in width, and is clearly de-

fined. The claim worked by the company is owned by Hugh R. Nepper, step-father of Frank Short.

There is little doubt that the company will purchase the claim, and then a smelter will be erected without delay.

Affairs at the mine have been brought to a temporary halt by the action of A. Hacker. The latter claims that he is entitled to 500 inches of the water of Dog creek, and avers that the company have appropriated the water by diverting the stream. He demands that the company be enjoined from interfering with his alleged rights.

The Haskell claim, three miles from the Pollasky railroad, is being exploited by W. M. Burton, Logan Beard and John Haskell. The vein of ore is wide and clearly defined, and the men think they have a bonanza.

Both of these claims were quite extensively worked at one time, but lack of capital forced their owners to shut down.

Copper is now in considerable demand, the electric supply factories consuming much more than ever before.—*Expositor*.

#### INYO COUNTY.

It is rumored that a party of Riverside prospectors are getting ready for a trip to the desert just as soon as the election is over. It was not learned who the moving spirits of the proposition are, but there seems to be little doubt that the rumor is well founded.

It is said that the objective point of the party is the old Panamint mining district, which a few years ago caused a great excitement in the mining world.

A number of Riversiders are interested in the district at present, and it is understood the company which they compose has some excellent prospects out there.

The beginning of the winter season always works renewed activity in desert mining affairs, as during the season life in that part of the country is much pleasanter than during the warm summer, when, as a matter of fact, life on the desert is next to impossible.—*Riverside Enterprise*.

#### KERN COUNTY.

Three daily stages now run between Mojave and the mines at Randsburg, Kern county, and frequently extra stages are sent out to accommodate the traffic.

Almost everyone is making plans to go to the desert mines immediately after the election. A paper in San Bernardino says that 300 people will leave that city for the mines after they vote. If the rumors are true, there are millions of gold yet in the country undiscovered. From all reports, the prospectors are swarming out on the desert in large numbers from every section of the country. Locations are being made in all directions and apparently there will be very little of the desert to file on. The rush began when the cool weather did.—*Echo*.

T. A. Baker is in Bakersfield from the Blue Chief mine and speaks very encouragingly of the prospects of it being a good find. He came in after some sacks in which to ship the ore to San Francisco.

R. B. Dickenson and W. W. Norris of Los Angeles have sold to J. Grant Lyman of Pasadena for \$10,000 an undivided 51-100 interest in Three Chimneys mine in the Keysville mining district. The mine is situated about seven miles south of Kernville on the west bank of the river opposite Hot Springs valley



## LASSEN COUNTY.

A company composed of Messrs. F. F. Kingsbury, F. Gross, W. Burrell and others, numbering eight in all, have men at work running a tunnel in the hill, near the Willard place, about eight miles west of Susanville on the Plattville road, with the hope of finding an old river channel thought to exist there. In 1853 some miners are reported to have taken out considerable gold from a small ravine within a few hundred miles from what is known as the adobe grade, and it is at this point that the company intend to prosecute the work. That they may succeed is the fervent wish of every one. It would seem that where the indications of rich mineral deposits exist as they do in this section, both in quartz and gravel, that some one should be fortunate enough to make a strike. There has for many years, been a lively interest in our mines, but unfortunately the output from any one of the various claims has not been very encouraging. At Diamond Mountain there are several large ledges of rich quartz, but it is almost a settled fact that the greater portion of it cannot be successfully reduced by the old processes. There is no lack of confidence as to the ultimate success of the mines at Diamond Mountain, and when capital shall have become interested and modern processes for reducing the ore are introduced then will the realization of the prophecies of those who have so long devoted their time and expended their limited means, be realized. With one mine operating and on a paying basis, it would not be long ere a dozen or more valuable prospects, which now lay dormant, would be sought after and development work begin. One thing favorable, however, is the fact that there are many more engaged in prospecting than ever before and the finding of a rich ledge would give an impetus to mining and would direct the eye of capital, ever watchful for an opportunity for profitable investment, to this locality. That we have rich and extensive bodies of ore in this section there is no doubt and all that now remains is the coming of capital to introduce a method of reducing the ore.—*Mail*.

## LOS ANGELES COUNTY.

## Acton Notes.

It is the current report that another ledge of lime rock has been discovered near Acton.

Mr. G. L. Schoonmaker, a mining expert, was in Acton looking over the country; he is delighted with the outlook.

Messrs. Walker and Todd are pushing work on their mine—the former Escondido—near Acton.

Mr. R. J. Saddler is spending a week's vacation in Los Angeles. He reports everything moving finely at the camp and the new mill nearly ready for work.

Messrs. Tom Kelley and Arthur Duehren are moving the little two-stamp mill formerly on the Kelley mine, to Randsburg. It is big enough for Randsburg, but too small for Acton.

The cable broke a few weeks ago at the Red Rover, but nobody was hurt. The accident has delayed work at the mine, but the trouble is remedied by the new cable from San Francisco, which lately arrived, and work is resumed. The old cable has been in use about a year and might have been all right

for some time had the worn piece which gave way been renewed. The Hon. Henry T. Gage says he would rather lose the whole mine than the life of one man, hence the new cable. Work on the main shaft, which is to be sunk to a thousand feet, has commenced and the Red Rover is doing a big thing in showing up the depth of Southern California mines.—*Acton Rooster*.

## MARIPOSA COUNTY.

Quite a number of prospectors are at work in Hunter's Valley. Goodall, Perkins & Co. have about fourteen men at work on the Barreta mine. Work on the Horseshoe mine is being pushed ahead. Upon the whole the valley presents quite a prosperous appearance.

It is understood that the Exploration Company of London, to whom the Mariposa grant has been offered, are about to make an examination of the property. The grant composes over 40,000 acres in Mariposa county, and within its borders there is without question a great deal of valuable mineral. Several mines on the grant have in the past paid well, but altogether the tract has been but slightly prospected.

J. A. Coram, of Lowell, Mass., one of the directors of the Merced Gold Mining Company at Coulterville, announces that it is their intention soon to begin the erection of the proposed electric plant for supplying the miners with power and light. It is proposed to take water from the Mokelumne river, bringing it by pipe eleven miles, and it is expected that they will be able to generate electricity enough to obtain 8000 to 10,000 horse power.—*Gazette*.

The Geary mine, which is being operated by Mr. Doolittle of San Francisco, under the personal supervision of W. E. Pierson, is looking well and everything goes to show that it is not a bad speculation for the enterprising gentleman who invested his money toward this mine's development. At the present time, but six men are employed, although in a few days an extra force will be put on, and it is safe to predict that the "Geary" will become one of the best producers of gold to be found anywhere in the southern mines.

Coal has been discovered on the land of the Slavonian Catholic Colony in Eden Valley.

## MONO COUNTY.

Pat Regan and Alex. Whitman, are prospecting in the vicinity of Castle Peak and it is reported that they have discovered some fine prospects.

Nick Ward and Hod Warner, who have a two year's lease of the Wolverine mine, are taking out some rich rock, and intend milling twenty or thirty tons at the Parrot arastra this fall.

Gus Cordez, after doing assessment work for seven or eight years and developing a rich mine in the Tioga district, to which he had after a good deal of labor and expense built a trail, was forbidden by Uncle Sam's blue coats to take out any ore. Although in the Park, these lands are timberless, and mineral, and should never have been included in the reservation.

A sufficient number of men will be put to work soon at Silver Peak to keep the mines and mills running steadily. It will require about 100 men to do this.—*Miner*.

At a special meeting of the stockholders of the Bodie Consolidated Mining Company, held

at noon on Tuesday, the 13, in San Francisco, the sale of the mining and other property of that company to the Standard Consolidated Mining Company, on the terms already published in the *Report*, was formally ratified. A similar meeting will be held by the stockholders of the Bulwer Consolidated Mining Company next week.

The Standard Mining Company of Bodie will, in the near future, sink the Bodie shaft 3000 feet more, increase their mill to 100 stamps and move their electric plant to Walker river for more power. The Standard, Bodie, Bulwer and Mono Mining Companies will be consolidated under the name of the Standard Exploration Company.

Jordan, a camp of Mono county, is booming. Fourteen mechanics have arrived from the Union Iron Works, San Francisco, to put up the new 48-stamp mill, which will be completed with all possible dispatch. Jordan will probably be a brisk little camp for some years. It will take a long time to work out the group of mines situated there.

## NAPA COUNTY.

The Napa Consolidated Quicksilver Mining Company paid two dividends of ten cents per share last week. One of the dividends was regular and the other an extra one. The amount of both was \$10,000, making \$70,000 paid since January 1, 1896.

## NEVADA COUNTY.

J. F. Poingdestre, W. P. Hancock and others, who own the Good Title mine in Browns Valley, have purchased a steam hoisting and pumping plant.

Samuel Poorman and J. C. Hastings have purchased the Milliken ranch on the Washington ridge for the purpose of working the mining ground, a rich gravel channel running through the ranch.

The Pennsylvania mine continues to turn out rich rock. There is a good ledge and plenty of rich ore in sight. The clean-up for the month of October was \$8000, not counting the rich sulphurets. A bar of gold was taken to the Citizens' bank from the mine Oct. 22nd, as the result of twenty-one days' run from the five-stamp mill.—*Union*.

The machinery from the Lamarque mine lately worked by Maltman & Thompson, has been moved to the Cedar mine on the Nickerson ranch in the lower part of the county. The Cedar mine has been prospected to some extent, and the results were very satisfactory.

Charles Stepp, of San Francisco has bonded the Mountain Chief mine in Willow Valley district. The work of pumping out the mines will begin next week and when this is done a force of men will be put on. Mr. Stepp has also bonded other mining property in that locality. The Mountain Chief adjoins the Texas.—*Transcript*.

Messrs. Fowler, Parsons and others have bonded the Last Chance mine, Washington district, to Dr. Manson of Towle.

At the Allison ranch mine everything is progressing nicely, says the *Telegraph*. The boiler house is all complete and boilers set. Smoke stacks are in position and tower a distance of over eighty feet towards the heav-



ens. The buildings for the compressors, dynamos and engines are also completed and the concrete beds for the heavy machinery are in place. The old foundations are being cleared away preparatory to laying new ones for the hoisting works, and contractor Body is now having timbers shaped for this purpose. The old office is undergoing complete renovation. It is a joyous thing to see so much activity down there and it means many years of prosperity for Grass Valley. John Tierney is in charge of the work for the company and everything is being done permanently and to the best advantage.

The annual meeting of the Nevada County Miners' Association was held Oct. 21st, in Nevada City. The report showed \$851.20 collected for the past year. The new officers elected were Frederick Zeitler president, Geo. Maiuhart vice president, W. F. Englebright secretary, J. F. Colley assistant secretary and B. F. Snell treasurer. The executive committee elected was Geo. C. Gaylord, Sherman W. Marsh, George Fletcher, D. B. Marvick, E. T. Worthley, J. S. McBride, C. D. Eastin, O. K. Cloudman, D. McPhetres, W. L. Mobley, H. Schroeder. The county sent 102 delegates to the State Miners' Convention last year and intends to send its full quota this year.

#### PLACER COUNTY.

A meeting of the Miners' Association of Placer county was held Saturday, the 24th ult. The county will be well represented at the State Convention. Placer county was next to Nevada last year in the number of delegates, ninety-two having been sent to San Francisco.

The Sacramento Land Office in the case of J. G. McCloud vs. C. P. R. R. Co. and C. Gomes, which involved the southeast quarter of southeast quarter of section 15 Tp. 12 N., R. 8 E., has declared that the land is more valuable for mineral than agriculture. The case resulted favorably for Mr. McCloud, whose Big Lead quartz mine location is on the land described. The land is located within the corporate limits of the city of Auburn.

Carnage & Federer have leased their small Hope gravel mine in Brushy Canyon, near Yankee Jims, to Messrs. Dougherty, Thomas and Vu Casovitch.

At the Cedar Creek mine, near Shady Run, rapid progress is being made in driving the tunnel. The tunnel, which is 5x7 feet, is in 640 feet, with 60 feet more to run to reach the point where the upraise will be made to tap the channel. The wonderful record of 254 feet of tunnel was made in 27 working days with four men. No timbers were needed. Andy Rogers is superintendent of the mine. —*Sentinel*.

A quartz vein that promises well has been discovered in the bedrock of the Sailor gravel mine in Sailor canyon.

The machinery is on the ground for a five-stamp mill at the Marguerite mine. Work has already commenced on the foundation for the mill.

The Mayflower is prospecting the gravel in the upper lead. They have found the same cap discovered in sinking the shaft in 1885, and the indications are similar to that found in the old Paragon.

The Marguerite Mining Company will shortly erect a 5-stamp mill on its property. The miners along the Klamath are doing good work now, and will continue to work until the cold weather drives them out.

#### PLUMAS COUNTY.

The Harrison mine at Granite Basin has about completed its summer run, and John Lawrence, its superintendent, is more than pleased with its past season's record. This mine has employed ten men during the summer, and with a ten-stamp mill and concentrators, put in at the beginning of the season's work, is about to close a flattering run. The ore is reported rich in free gold, and the sulphurets are also rich.

The Four Hills Mining Company is busy erecting a ten-stamp mill. A ten-stamp mill is also being erected on the Little Jamison mine.

B. J. Tremain who has been mining near Cromberg for the past several months returned to Susanville last Monday evening. He left for the Green Mountain mine the following morning.

At the Genesee mine Ed Kelsey is working tailings in an arastra and is supposed to be obtaining good results.

#### RIVERSIDE COUNTY.

A new strike has been made in the Desert Queen mine. A few days since the miners at the foot of the incline opened out on a ledge which is very similar to that at the top of the ground, and which, when the find was made, furnished the reason for the belief that the mine would prove a bonanza.

The new ledge was encountered at a depth of about 30 feet from the surface in a vertical line. The ore is full of free gold, just as was the ore at the surface, while the ledge is four feet in width, and assays from \$60 to \$80 to the ton.

Prospectors in the employ of the Desert Queen people have made another location across the gulch from the now famous property, and mining men who have seen it are of the opinion that it will add another to the producers of the Pinon district.

Frank M. Mott and others who have been working a mine about three and a half miles northeast of Winchester, have had the good luck to strike an asbestos vein. At present it is impossible to say to what extent the vein will run, but the quantity in sight will number thousands of tons. A sample of the asbestos is pronounced, by those who have worked in asbestos mines, as being of the purest and best kind. It is of a beautiful white color, and when rubbed between the fingers has a fine and silky feeling. Frank and his partners are at present erecting a dwelling house, and as soon as completed a mill house and other buildings will be erected and the necessary machinery put in. The demand for asbestos at present is greater than the supply. There are only seven counties in this state producing asbestos, and for the year ending Dec. 31, 1895, the output was only 3077 tons.

H. B. Varcoe, of Perris, has received a new skip for the Gavalin mine, in the Pinecate mining district.

John Furlong and Emmet Bethrond have located a claim in the Pinecate district, to be known as the Widow's Mite.

There is considerable activity at Virginia Dale mining district in the development of mines thus far discovered, and also a great interest in prospecting the country for new discoveries. There is all the way from twenty to thirty outfits on the way to the Virginia Dale and surrounding country. This would lead one to believe that the district has in store a bright and prosperous future.

#### SAN BERNARDINO COUNTY.

##### A New Ten-Stamp Mill.

Harrison & Williard shipped a 10-stamp mill from Los Angeles and a carload of lumber from San Bernardino to Harper's Station, on the Atlantic and Pacific, Oct 23d. From Harpers the material will be hauled to the owner's well on Cuddeback Dry Lake, where the mill will be erected and put in operation.

The mill-site is about 14 miles from Randsburg, in San Bernardino county, and custom work will be done for several of the near-by mines on the Randsburg and Fremont's Peak districts.

Messrs. Harrison & Williard have ore of their own to supply the mill for some time to come, but will do such outside work as they can handle.

The water supply is very good, there being amply sufficient to run 10 or possibly 20 stamps. The water has remained in the well all summer, and a supply for the entire year is assured.

The mill to be located at Dry Lake will be the largest in that part of the mining country. There are two mills at Cow Wells, but the largest has only eight stamps. The setting up of the new mill will make it possible for much ore in the vicinity to be worked up, and permit working tests to be made, and aid materially in the development of the district.

##### Riches in the Rose Mine.

R. F. Harrison, the superintendent of the Rose mine under the new management, was in San Bernardino the middle of last month, and from the reports he brings, together with information derived from other sources, the outlook at the Rose mine is more favorable than at any time in the history of the mine.

It was bonded for \$100,000 in May, the prospective purchasers being O. O. Howard, jr., a capitalist from Chicago, named Grant, and Mr. Harrison, some others also being associated with them in the company, which was to take up the stock of the Morongo Company.

As soon as Mr. Harrison took charge, he at once began to force the work, following the ledge directly at its angle, rather than by a series of inclines and levels, while the machinery for operating the mine was added to and improved, and it was put in shape to work. Among other things was a new gasoline hoisting plant, which has made the raising of ore much more simple.

And the result has justified the outlay, there is now no doubt that the mine will be bought on the bond. A few days ago a new strike was made, and the miners are now working in a breast of ore 20 feet across, some of it very rich. All of it is sorted, and the low grade piled up on the dump, to be worked at the mill. It runs from \$70 to \$100, while the rich rock is shipped to the smelter, and nets from \$250 to \$700 per ton. Three six-horse teams are now engaged in hauling the rich ore to the railroad for shipment.



Mr. Harrison says it is the intention to at once establish a school, a store and a post-office, and take on the appearance of a regular mining camp. Thirty-five men are employed in the mine and mill, and work is prosecuted night and day.—*San Bernardino Weekly Sun*.

#### The Virginia Dale Road.

The road in the Virginia Dale mining district will be built at once. The committee, consisting of Messrs. Randall and Holbrook, reported favorably, October 16th, and the board appropriated \$300 and ordered the work done at once.

The main drawback the pioneers of that district have to contend with is the lack of water and good roads. The distance to water from the mines ranges from 5 to 15 miles, the supply being wells dug in the valley.

Word was received from the Macedonia mining district, out near Fenner, a few days ago, to the effect that there is a good strike in the Columbia Ledge, and they are taking out lots of good ore. The pay streak is from one to three feet wide. Prospectors are coming to the district now and making new discoveries daily. Mr. Campbell is developing some of his mines in the district, with good results.

Mr. Kennedy, who is interested with Ed Lamb in mining properties, has made one of the richest strikes of gold-bearing quartz that has ever been discovered on the desert. He came in to the Needles, Cal., from his find the first of the week with several specimens, one of which will go \$100,000 to the ton. The quartz, which is very dark and not copper stained, taking out all the free gold, assays \$18 to the ton. The location of this rich vein is a few miles north of the Indian reservation down the river. This makes the fourth or fifth rich find in that part of the country within the last few weeks and they all promise to make their owners fortunes. This section of the country will, unless all signs fail, be one of the greatest gold producers in the world at no distant day.

Placer mining has been resumed in Lytle Creek, where ground was worked years ago.

Another gold find is reported from Little Moronge canyon, east of Redlands, and about twelve miles north of Indian Wells, in the Virginia Dale mining district. The croppings are filled with stringers of gold and are very rich.

#### SAN DIEGO COUNTY.

After a few months of prospecting and developing, Wm. S. Clark has sold his third interest in a group of six mines, in the San Mateo canon, for \$8,550. This canon is in the extreme northwestern corner of the county, and is found to contain large bodies of good ore. Mr. Clark and his brother Arthur were in Fallbrook last week showing specimens of their rock, and the miners there, say the boys must have struck something rich. They have retained a number of claims in the canon, and intend to stay with the district.

A shipment of \$30,500 was made from the Golden Cross mines at Hedges, Oct. 16. This is the largest single bullion shipment ever made from these mines. A body of \$10 ore has been struck. The magnitude of this ore body makes it of importance. The Golden Cross Company has a mill of 140 stamps. Its excellent facilities for handling this ore

promise large returns in the near future.—*Hemet News*.

Col. D. K. Allen has sold for \$60,000, to George W. Ireland, the Golden Dream group of five mines, the Little Frank group of five mines, the Alcyon group of five mines, the Ore Blanco group of five mines, the Noon Day group of five mines and four millsites, situated in White Gold basin, in the old Picacho district, on the Colorado river, in San Diego county. The veins are noted for their great size. They are of low grade, but have the advantage of being near the Colorado river. The ore runs from \$5 to \$6 per ton, in free gold, by mill process.

#### Picacho.

Ex-Senator S. W. Dorsey sailed from London on the 14th inst., was in New York on the 22d, and reached Picacho on November 1st, having been successful in raising the money with which to develop his thirty mines in the Picacho Basin, put up a 100 stamp mill and build a railroad from the mines five miles to the Colorado river, where the mill will be built.

The Senator was also successful in placing another group of thirty-one mines, adjoining the above, in the hands of one of the wealthiest mining companies in London. These mines were purchased from Col. D. K. Allen, and are the same which were bargained for by Henry S. Selleg, of New York, for M. E. Graves and George Gould, last November.

George W. Ireland and J. L. Rice, of the Golden Dream Mining Company, at Picacho, were in the city last week, examining the machinery purchased for their new 10-stamp prospecting mill.

Col. D. K. Allen has been elected vice-president and general manager of the Golden Dream Mining Company, at Picacho, which lately purchased twenty-five mines of him.

M. R. Ritchie, lately with the Blossom and the Cargo Muchacho mines, near Ogilby, has been engaged by Col. Allen, to take charge of the Golden Dream Company's new mill at Picacho.

#### A CARD.

GOLDEN DREAM MINES, }  
PICACHO, CAL., Oct. 20, 1896. }  
Editor *Sentinel*,  
Yuma, Arizona.

DEAR SIR:—We, the undersigned, interested in the Golden Dream mines, at Picacho, have for the past few days been making a careful investigation of the work done there under the management of Col. D. K. Allen, and have thoroughly tested the ores taken from the different mines by our own hand, and found them all much better than represented to us by him, and we also have examined the accounts, etc., and found them correct, and that the anonymous letters and reports received by us from other sources were untrue, and that we are convinced that we have in the claims bought of him much better showing than he has been giving us.

GEO. W. IRELAND,  
J. L. RICE.

#### SIERRA COUNTY.

The Sierra County Miners' Association, which has done much to aid the California Miners' Association, intend to send the largest delegation to the convention at San Francisco this year that has ever gone from the county. Last year they were represented by eight delegates, but the number will probably be largely increased this year.

#### SHASTA COUNTY.

Will Ellis of French Gulch, in company with two other miners, has struck an extension of the well known Ellery mine, and it is likely the fortunate discoverers will realize a great deal from their lucky find.

Beckwith prospectors are doing well. Dr. Saxton recently cleaned up 15 ounces of gold, and Ben Cole, who is prospecting on Indian Creek, has written home that he has struck a promising prospect.

#### TUOLUMNE COUNTY.

The mines adjacent to Soulsbyville are showing up splendidly, and this section promises in the near future to be one of the busiest mining camps in this section of California.

The Confidence mine has been pumped out by the parties from Salt Lake who bonded it from Baker and Hamilton. A 30-stamp mill is to be erected at once.

#### YUBA COUNTY.

The suit of the Good Hope Mining company against Mr. Jones, agricultural claimant, will come up for trial before the United States Circuit Court in a short time, says the *Union*. Mr. Jones has applied for an extension of time, however, but this has been refused, and the date for hearing the case will be fixed on the 2nd of November. The mine is situated on the line between Nevada and Yuba counties and is considered very valuable. The rock extracted has paid well, and experts who have examined the mine say it has every indication of being very rich.

## GENERAL NEWS

The great activity in mining is encouraging many of the old San Francisco firms to lay in stocks of goods for the miners, or to manufacture machinery or supplies for them. The well known Pacific Sheet Metal Works, at 209 Mission street, are now making a specialty of rolls for vanners, and iron pipe, which they make any size, for special orders. They have every facility to turn out work promptly and at the most reasonable figure, as they have their own factory, where they employ 550 hands. The firm have a branch at Astoria, Oregon, and are now establishing another one on the Fraser river, in British Columbia. Their vanner rolls are used by all the best concentrators, and have been sent to all parts of the world.

## DELEGATES

The following is a list of the delegates to the Miners' Convention that was received by the JOURNAL up to the time of going to press.

#### NEVADA COUNTY.

F. J. Dowson	Thos. Pierce
All Tregidgo	H. G. Parsons
W. F. Prisk	C. E. Clinch
Robt. Walker	A. De Witt Foote
Joseph Weissbein	Saml. Granger
J. L. Lakeman	John Glasson
L. E. Phillipps	M. Farrell
E. E. Culler	John Eddie
T. H. Wilhelm	Goe. D. McLean
Louis Dorsey	Geo. Mainhart
D. B. Marvick	R. R. Porter
J. P. Maleville	Wm. Campbell
Edw. Morgan	Geo. Fletcher
Jas. Hoskins	M. Sproue



J. F. Kidder  
W. R. Eckart  
Wm. George  
J. S. Goodwin  
C. D. Eastin  
G. Ozall  
O. Woehler  
C. L. Miller  
J. S. McBride  
Fred Zeitler  
M. Bates  
J. S. Gregory  
Geo. Nihell  
F. Eilerman  
M. L. Marsh  
Geo. E. Turner  
A. D. Mason  
J. J. Jackson  
Chas. Stepp  
J. A. Northway  
W. Martin  
C. Schuster  
J. T. Morgan  
Gus. Kartyeboke  
Geo. C. Shaw  
N. P. Brown  
A. H. Walrath  
H. Pengelley  
F. Broeckman  
C. Jepson  
R. D. Skidmore  
W. Mobley  
P. Curnon  
C. E. Uren

## EL DORADO COUNTY.

Thos. F. Houghton  
W. H. Husband  
H. L. Robinson  
John Melton  
L. R. Poundstone  
J. J. Crawford  
B. M. Cope  
Thos. Clark  
O. S. Buckbee  
A. H. Tenbroeck  
E. W. Chapman

## YUBA COUNTY.

W. R. Meek  
J. C. Campbell  
Daniel Gettins  
Otto Woehler  
James O'Brien  
E. F. Holbrook  
W. W. Chamberlin  
C. C. Duhain

## ALAMEDA COUNTY.

J. S. White  
T. W. Jeffres  
S. B. Christy  
Geo. Burbeck  
G. I. Taggart  
Du Ray Smith  
Mark Webber  
E. C. Loftus  
Warren Schilling  
John B. Eldridge

## SISKIYOU COUNTY.

Robert Nixon  
A. H. Bar  
Martin C. Beem

M. C. Taylor  
James Beunallack, Sr.  
R. Linder  
L. J. Garver  
H. Fritter  
C. Peach  
E. J. De Sabla  
R. A. Thomas  
R. C. Walrath  
W. F. Englebright  
E. J. Rector  
H. Lane  
Wm. Giffin  
Geo. C. Gaylord  
Will Fisher  
W. G. Richards  
J. M. Walling  
C. J. Brand  
C. H. Mallon  
Nites Searles  
Dahl Vicens  
D. McFall  
Joseph Fetz  
I. Fred Searles  
F. E. Wadsworth  
E. Tilley  
Nat Isoard  
Peter Tantphares  
J. V. Hunter  
L. L. Meyers  
J. H. Helwig  
A. S. Bigelow  
Danl. Coffin

## CALAVERAS COUNTY.

I. H. Reed  
T. T. Lane  
E. C. Loftus  
A. J. Brooks

Richard Parker  
J. J. McSally  
W. H. Clary  
Mark B. Kerr

## SIERRA COUNTY.

James McGregor  
F. W. Hanley  
Julian Sountag  
Andrew Carrigan  
I. Copeland  
Stanley A. Smith  
J. F. Cowdery  
Chas. P. Gale  
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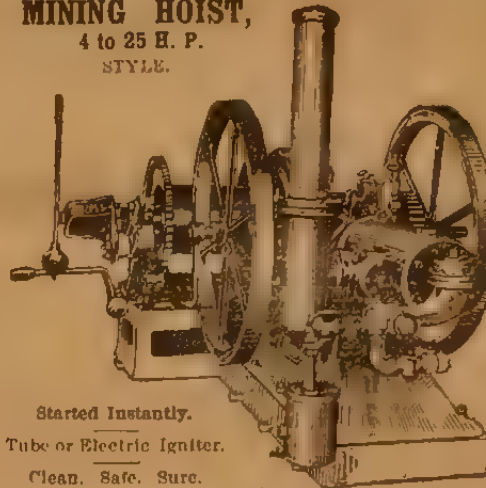
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## OBITUARY.

I. Z. Davis who has been president of the Mining Board of Directors of the State Mining Bureau in San Francisco for many years died in Philadelphia, October 28th, at the age of seventy-six years.

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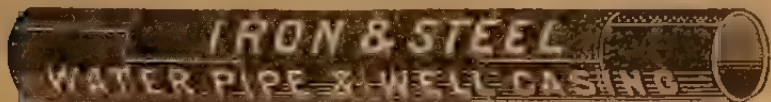
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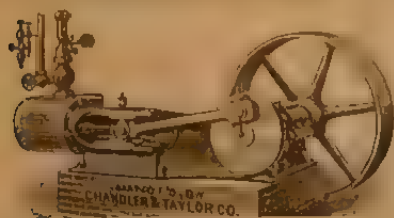
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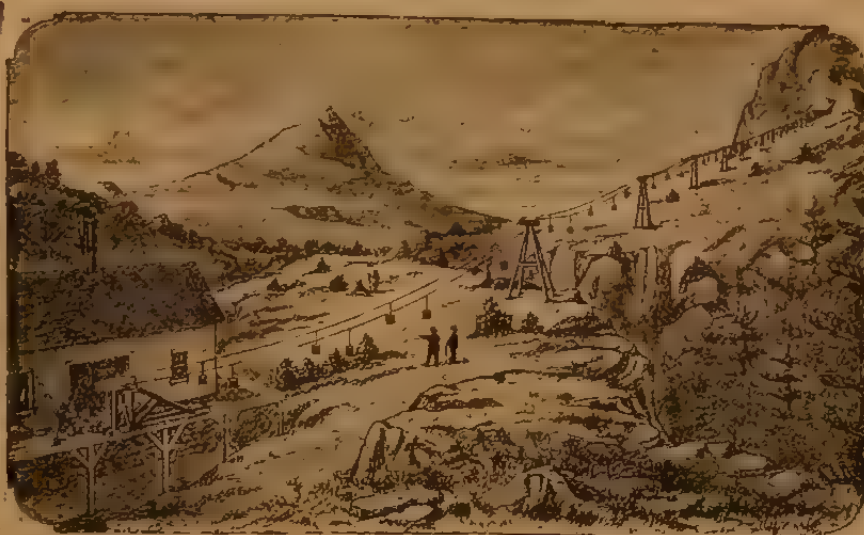
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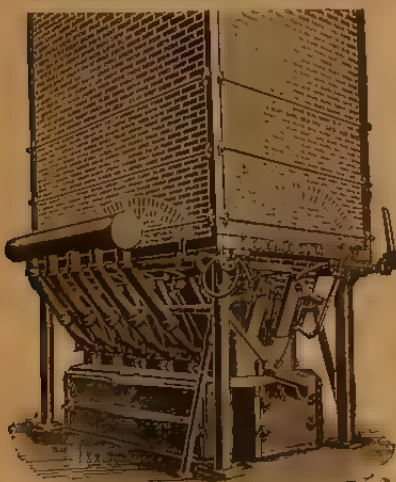
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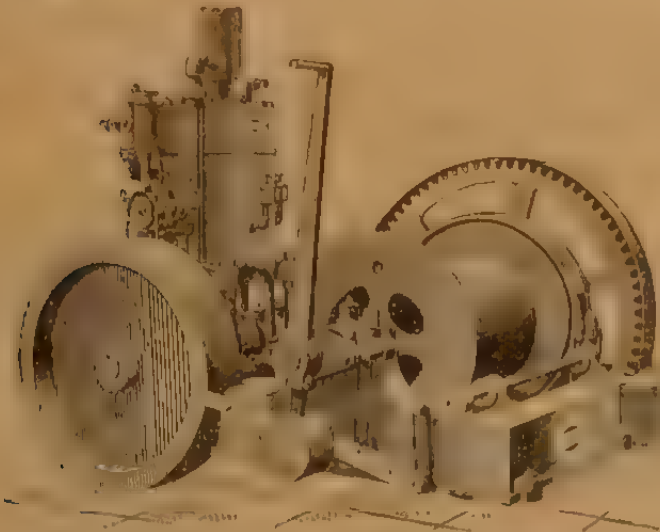
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New York Quotations:

	SILVER	COPPER	LEAD
Oct. 16	63 1/2	10 7/8	2 05
" 17	63 1/2	10 7/8	2 05
" 18	63 1/2	10 7/8	2 05
" 19	63 1/2	10 7/8	2 05
" 20	63 1/2	10 7/8	2 05
" 21	63 1/2	10 7/8	2 05
" 22	63 1/2	10 7/8	2 05
" 23	63 1/2	10 7/8	2 05
" 24	63 1/2	10 7/8	2 05
" 25	63 1/2	10 7/8	2 05
" 26	63 1/2	10 7/8	2 05
" 27	63 1/2	10 7/8	2 05
" 28	63 1/2	10 7/8	2 05
" 29	63 1/2	10 7/8	2 05
" 30	63 1/2	10 7/8	2 05
" 31	63 1/2	10 7/8	2 05

## MINING STOCK QUOTATIONS.

## BOSTON

Allouez .....	50	Franklin .....	10 00
Atlantic .....	15 00	Kearsarge .....	10 00
Boston & Mont'a .....	75 00	Quebec .....	23 00
Butte & Boston .....	1 50	Quincy .....	108 00
Cal. & Helca .....	300 00	Tamarack .....	75 00
Centennial .....	2 00	Wolverine .....	8 50

## COLORADO SPRINGS STOCKS

Anaconda .....	50	Mollie Gibson .....	55
Blue Bell .....	05	Maton .....	11
Colfax .....	05	Mount Rosa .....	12
Columbine .....	02 1/2	Ophir .....	07
Fanny Rawlins .....	05	Orphan Bell .....	13
Gold King .....	52	Pharmacist .....	10
Gold and Globe .....	23	Portland .....	1 45
Isabella .....	54	Work .....	8
Jack Pot .....	04	World .....	02 1/2
Laurel .....	18	Del Monte .....	02 1/2
Marquette .....	18		

## DENVER STOCK REPORT

Alamo .....	03	Anaconda .....	58
Bangkok .....	05	Aola .....	03
Bankers .....	10	Big Six .....	10
Cross .....	05	Boston & Id .....	17
C. C. Con .....	13	Colfax .....	08
Chimbarazo .....	03	Gold & Globe .....	17
C. & O. C. .....	04	Mollie Gibson .....	50
Golden Fleece .....	55	Mt. Rosa .....	12
Gold Standard .....	04	Pharmacist .....	10
Isabella .....	54	Union Gold .....	30

## HELENA, MONTANA

Alice .....	25	Granite Mount' .....	1 65
Bald Butte .....	2 55	Hope .....	1 50
Benton Group .....	10	Iron Mountain .....	42
Bl. Metallic .....	3 00	Ontario .....	1 00
Elizabeth .....	10	Poorman .....	40

## NEW YORK

Crown Point .....	45	Sierra Nevada .....	85
Con. Cal. & Va. .....	1 80	Standard .....	2 75
Gould & Curry .....	80	Union Con .....	53
Hale & Norcross .....	1 25	Iron Silver .....	10
Homestake .....	80 50	Quicksilver .....	3 00
Mexican .....	50	Quicksilver pfd .....	17 02
Ontario .....	14 50	Bulwer .....	25
Ophir .....	1 30	Yellow Jacket .....	35
Plymouth .....	20	Deadwood .....	45

## SAN FRANCISCO.

Alta .....	10	Mono .....	15
Belcher .....	37	Nevada Queen .....	50
Best & Belcher .....	55	Ophir .....	95
Bodie Con .....	55	Potosi .....	95
Chollar .....	2 25	Savage .....	75
Con. Cal. & Va. .....	1 80	Sierra Nevada .....	53
Crown Point .....	45	Union Con .....	45
Hale & Norcross .....	1 25	Utah .....	11
Mexican .....	55	Yellow Jacket .....	45
Gould & Curry .....	85	Bulwer .....	25

## ST. LOUIS.

American Nettle .....	25	Elizabeth .....	20
Granite Mt. ....	1 50	Leo .....	3
Adams .....	50	Hope .....	1 40
Bi-metallic .....	3 30	Small Hopes .....	90

## SALT LAKE CITY

Ajax .....	85	Bureka Hill .....	120 00
Alliance .....	30	Horn Silver .....	2 05
Am. Nat G's .....	03	Little Pittsburg .....	03
Anchor .....	1 25	Lucky Bill .....	25
Appex .....	07	Mammoth .....	3 05
Bogan .....	20	Mecars .....	50
Bull. Beck .....	6 70	Mercur .....	7 10
Cane Springs .....	80	New Tintle .....	2 80
Cent Bureka .....	75 00	Niagara .....	2 25
Cleves. Con .....	45	No. Bureka .....	05
Comstock .....	15	North Spy .....	2 40
Crescent .....	04	Ontario .....	12 00
Dalton .....	04	Silver King .....	17 25
Daly .....	7 50	Silver Spar .....	1 00
Daly West .....	8 70	Tetro .....	08
Elko .....	20	Utah .....	1 85

## MEXICO

Name of Company	State	Price
Angustias .....	Guanajuato	\$ 400
Asturiana y Anexas .....	Zacatecas	440
Cerro Colorado .....	Chihuahua	10
Concepcion y Anexas .....	S. Luis Potosi	180
El Oro .....	Guanajuato	80
do pre .....	"	00
Luz de Borda .....	Michoacan	30
do Free stock .....	"	30
Luz de Maravillas .....	Hidalgo	110
Real del Monte .....	"	350
Rosario y Anexas .....	Durango	70
do. prof .....	"	50
San Rafael del Oro .....	Guanajuato	80
Sta. Gertr y Anexas .....	Hidalgo	187
do. Free Stock .....	"	301
Sta. Maria de la Paz .....	S. Luis Potosi	506
Tlausingo .....	Puebla	000
Zomclahuacan (gold) .....	Vera Cruz	01
Zona Min de Pozos .....	Guanajuato	01

Note—The above Mexican stocks are figured  
on the basis of Mexican silver

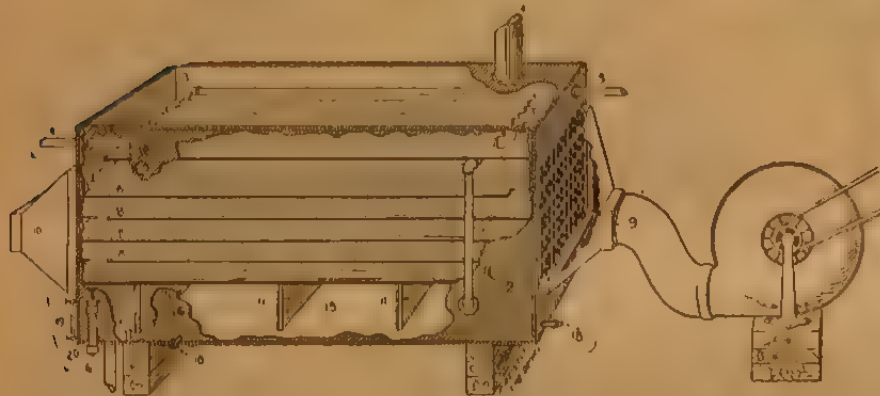


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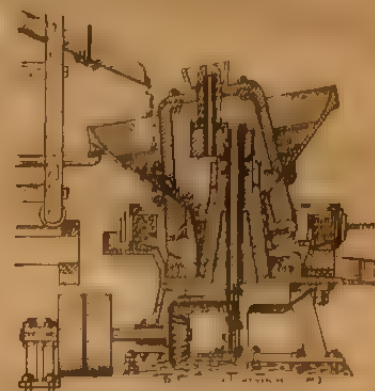
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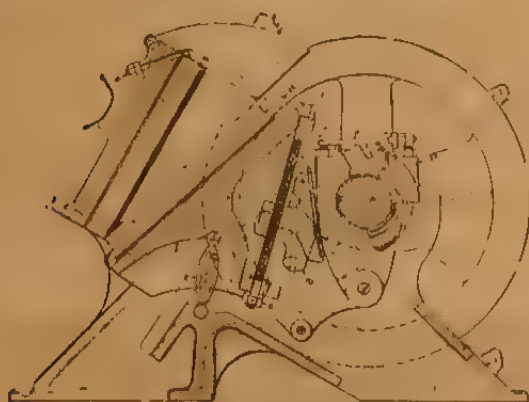
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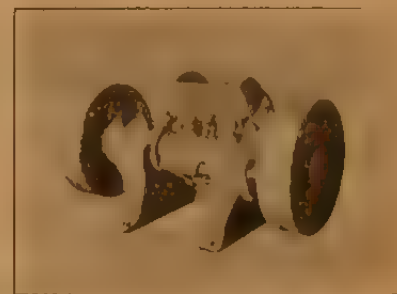


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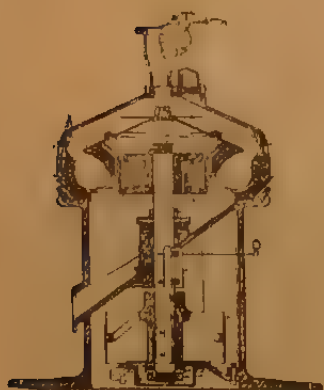
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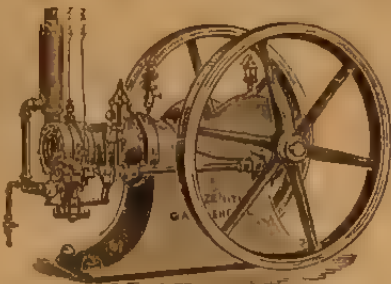
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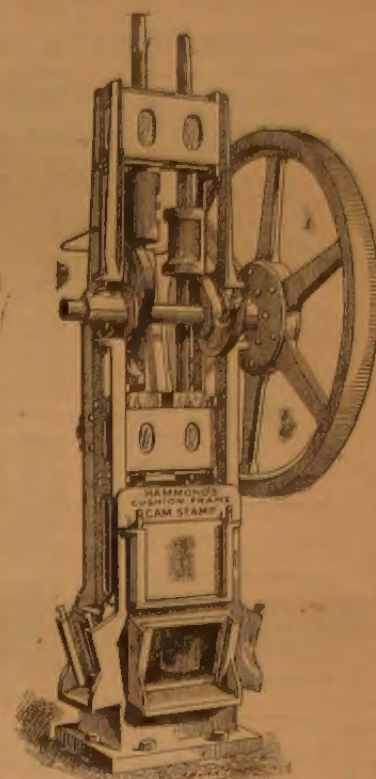
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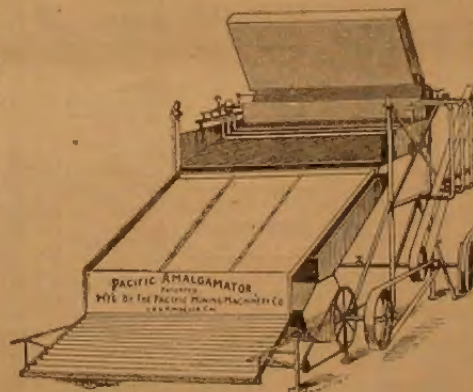
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J. A. HEDOE  
Inventor and Manager

Send for further particulars to

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## ORE TARIFF.

From Points in Mexico, New Mexico, Texas and Arizona, to El Paso, Pueblo, Denver and Kansas City.

## ATCHISON, TOPEKA &amp; SANTA FE R. R.

FROM	TO	Car Loads, in dollars and cents per ton of 2,000 lbs.			
		Ore Concentrates			Lead Bullion, valuation not to exceed \$100 per ton.
		Valuation not to exceed \$50 per ton.	Valuation not to exceed \$100 per ton.	Valuation not to exceed \$300 per ton.	Base Metal, Copper Matte, Bar and Black Copper, valuation not to exceed \$300 per ton.
Guaymas... Mex.	El Paso	10 00	11 50	13 50	
	Pueblo	13 50	15 00	17 00	
	Denver	15 00	16 50	18 50	
	Kansas City	15 50	17 00	19 00	
Ortiz..... "	El Paso	9 50	11 00	13 00	
	Pueblo	12 50	14 00	16 00	
	Denver	14 00	15 50	17 50	
	Kansas City	14 50	16 00	18 00	
Torres..... "	El Paso	8 00	10 00	12 50	
	Pueblo	11 50	13 00	15 00	
	Denver	13 00	14 00	16 50	
	Kansas City	13 50	15 00	17 00	
Hermosillo... "	El Paso	8 50	10 00	12 00	
	Pueblo	10 00	11 50	13 50	
	Denver	11 50	13 00	15 00	
	Kansas City	12 00	13 50	15 50	
Peaqueira... "	El Paso	8 00	9 50	11 50	
	Pueblo	10 00	11 50	13 50	
	Denver	11 50	13 00	15 00	
	Kansas City	12 00	13 50	15 00	
Querobabi... "	El Paso	7 00	8 50	10 50	
	Pueblo	10 00	11 50	13 50	
	Denver	11 50	13 00	15 00	
	Kansas City	11 50	13 00	15 00	
Santa Ana... "	El Paso	8 50	9 00	10 00	
	Pueblo	9 50	11 00	13 00	
	Denver	11 00	12 50	14 50	
	Kansas City	11 50	13 00	15 00	
Magdalena... "	El Paso	8 00	7 50	9 50	
	Pueblo	9 50	11 00	13 00	
	Denver	11 00	12 50	14 50	
	Kansas City	11 50	13 00	15 00	
Imuris..... "	El Paso	8 00	7 50	9 50	
	Pueblo	9 50	11 00	13 00	
	Denver	11 00	12 50	14 50	
	Kansas City	11 50	13 00	15 00	
Nogales... A. T.	El Paso	5 50	6 50	8 50	
	Pueblo	8 00	10 00	12 50	
	Denver	10 00	12 00	14 50	
	Kansas City	11 00	12 50	14 50	
Calabasas... "	El Paso	5 50	6 50	8 50	
	Pueblo	8 00	10 00	12 50	
	Denver	10 00	12 00	14 50	
	Kansas City	10 50	12 00	14 00	
Sanford... "	El Paso	5 50	6 50	8 50	
	Pueblo	8 00	10 00	12 50	
	Denver	9 50	11 00	13 00	
	Kansas City	10 00	11 50	13 50	
Crittenden... "	El Paso	4 70	5 70	7 70	
	Pueblo	8 00	9 50	11 50	
	Denver	9 50	11 00	13 00	
	Kansas City	10 00	11 50	13 50	
Fairbank... "	El Paso	4 40	4 40	6 40	
	Pueblo	8 00	9 50	11 50	
	Denver	9 50	11 00	13 00	
	Kansas City	10 00	11 50	13 50	
Tucson... "	El Paso	4 35	4 35	6 35	
	Pueblo	8 00	10 00	12 50	
	Denver	9 50	11 00	13 00	
	Kansas City	10 00	11 50	13 50	
Benson... "	El Paso	8 00	10 00	12 50	
	Pueblo	9 50	11 50	13 50	
	Denver	10 50	12 50	14 50	
	Kansas City	11 00	12 00	14 00	
Steins Pass, N.M.	El Paso	8 00	9 50	11 50	
	Pueblo	9 50	11 00	13 00	
	Denver	10 50	12 00	14 00	
	Kansas City	11 00	12 50	14 50	
Lordsburg... "	El Paso	7 50	9 00	11 00	
	Pueblo	9 00	10 50	12 50	
	Denver	10 50	12 00	14 00	
	Kansas City	11 00	12 50	14 50	
Silver City... "	El Paso	2 80	3 20	4 70	
	Pueblo	6 50	8 00	10 00	
	Denver	8 00	9 50	11 50	
	Kansas City	8 50	10 00	12 00	
Hudson... "	El Paso	2 40	3 00	4 50	
	Pueblo	6 50	8 00	10 00	
	Denver	8 00	9 50	11 50	
	Kansas City	8 50	10 00	12 00	
Deming... "	El Paso	2 20	2 80	3 80	
	Pueblo	6 00	7 50	9 50	
	Denver	7 50	9 00	11 00	
	Kansas City	8 00	9 50	11 50	
Florida and Lake Valley	El Paso	2 20	2 80	3 80	
	Pueblo	6 00	7 50	9 50	
	Denver	7 50	9 00	11 00	
	Kansas City	8 00	9 50	11 50	
Nutt... "	El Paso	2 20	2 40	3 40	
	Pueblo	6 00	7 00	8 00	
	Denver	7 50	8 00	10 00	
	Kansas City	8 00	9 00	11 00	
El Paso... "	El Paso	6 00	7 50	9 50	
	Pueblo	7 50	9 00	11 00	
	Denver	9 00	10 50	12 50	
	Kansas City	9 50	11 00	13 00	
Las Cruces... "	El Paso	1 50	2 00	3 00	
	Pueblo	5 00	6 50	8 50	
	Denver	6 50	8 00	10 00	
	Kansas City	7 00	8 50	10 50	
Rincon... "	El Paso	2 00	2 00	3 00	
	Pueblo	5 50	7 00	9 00	
	Denver	7 00	8 50	10 50	
	Kansas City	7 50	9 00	11 00	

FROM

TO

Car Loads in dollars and per ton of 2,000 lbs.

Ore Concentrator.

Valuation not to exceed \$50 per ton.

Valuation not to exceed \$100 per ton.

Valuation not to exceed \$300 per ton.

Lead Bullion, valuation not to exceed \$100 per ton.

Base Metal, Copper Matte, Bar and Black Copper, valuation not to exceed \$300 per ton.

A. T. &amp; S. F. R. R.

ATLANTIC &amp; PACIFIC RAILROAD

A. T. &amp; S. F. R. R.

S. C. D. &amp; P. R. R.

SOUTHERN PAC CO.

NEW MEXICO &amp; ARIZONA R. R.

SONORA RAILWAY

FROM

TO

Valuation not to exceed \$50 per ton.

Valuation not to exceed \$100 per ton.

Valuation not to exceed \$300 per ton.

Lead Bullion, valuation not to exceed \$100 per ton.

Base Metal, Copper Matte, Bar and Black Copper, valuation not to exceed \$300 per ton.

El Paso

Pueblo

Denver

Kansas City

Flagstaff, A. T.

Prescott Jct.

Peach Spgs.

Hackberry

Kingman

Yucca

Needles, Cal.

Fenner

Bagdad

Daggett

Barstow

Kramer

Mojave

El Paso

Pueblo

Denver

Kansas City

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# THE PUEBLO Smelting and Refining Company,

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BUYERS OF

Gold, Silver, Lead and Copper Ores,  
Copper Matte and Bullion.

## Refiners of Gold, Silver, Lead and Copper.

Manufacturers of Bar and Pig Lead, Lead Pipe, Antimonial Lead, Copper Ingots,  
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Especial Attention to Sampling by most Approved Processes.

Quick Returns on all Consignments.

### KENDALL GOLD & SILVER EXTRACTION COMPANY

THE KENDALL PROCESS is the most efficient method of using cyanide for the extraction of precious metals from their ores: wherever the process has been adopted the result has been increased, percentages of values recovered and saving of time; material reduction in consumption of chemical has also been demonstrated with respect to several classes of ores.

All ores, without exception, amenable to cyanide treatment, can be treated to better advantage by the Kendall Process; this can be accepted as an axiom.

The manager of one of the largest mines in the Mercur district, Utah, telegraphs as follows: "We now begin to understand dioxide process; last 20 days treated 220 tons per day of \$26.50 ore, average of all tailings samples \$.88."

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Miners will find the ore tariffs on page 22 reliable. We have special arrangements with the different railroads to receive any changes as soon as made.

**CLARENCE HERSEY,**  
**Assayer and Chemist,**

(Established 1879)

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Samples by Mail or Express Receive Prompt Attention

SPECIMEN ASSAY PRICES:

Gold silver and lead, \$1.00; any two of the above, 75c; any one of above, 50c; copper analysis, \$1; platinum, nickel or tin, \$5.00.  
Write for full price list and mailing envelopes.

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Mining Engineer ..

Oro Blanco, Arizona

30 years experience in exploration, mining and milling. 10 years as superintendent and manager. Boston, New York, and Chicago references.

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**Mining Machinery**  
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The **Puget Sound Reduction Company**

PURCHASERS OF

**GOLD, SILVER, LEAD AND COPPER ORES**

Special Facilities for Handling ores from the South-West and Mexico

EVERETT - - - WASHINGTON

### Electric Bells for Mines

A Great Improvement over the Old Pull Wire.

**Telephones for Mines**

A Quick and Accurate way of Communicating Messages,  
Indispensable in Deep Mining.

**WYBRO & LAWRENCE,** 522 South Broadway,  
Los Angeles, Cal.

Turbine  
AND  
Cascade

# WATER WHEEL

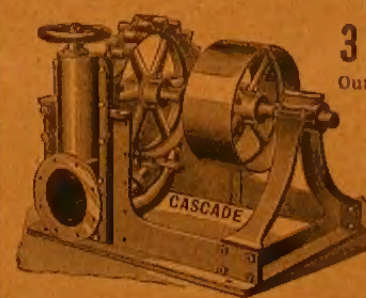
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**3 Feet to 2000 Feet**

Our experience of 33 YEARS building Water Wheels enables us to suit every requirement of Water Power Plants. We guarantee satisfaction.

Send for a Pamphlet of either Wheel and write full particulars.


**James Leffel & Co.**  
SPRINGFIELD, OHIO, U.S.A.





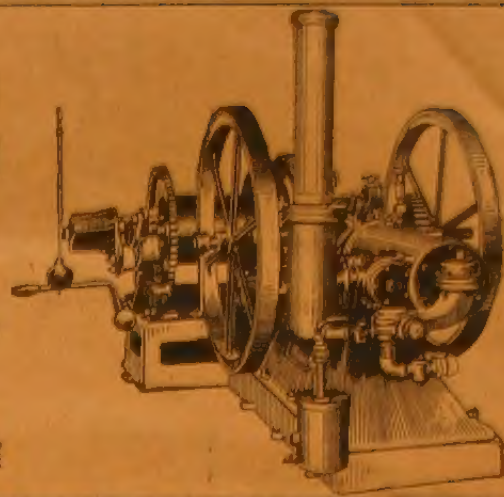
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FOR HOISTING, PUMPING AND MILLING

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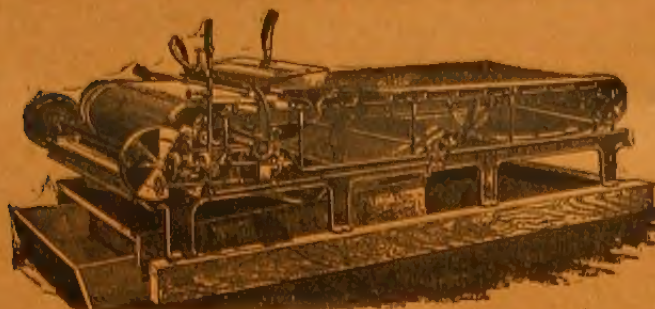
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Hendy Improved Triumph Concentrator

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Manufacturers of

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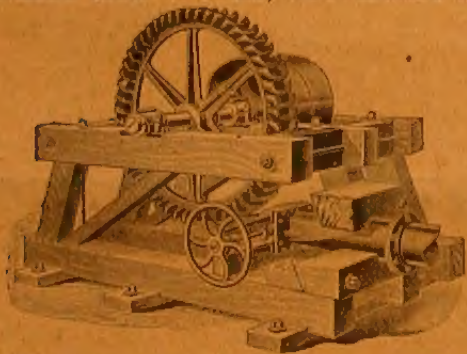
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Improved Bryan Mills,

Risdon Ore Feeders, 'Challenge' Type  
Air Compressors

Mining, Milling, Pumping and  
Hoisting Plants,

GOLD AND SILVER STAMP MILLS.

Catalogues and Prices on Application.



The above cut shows the general arrangement of Knight's Standard Water Wheels, of which there are more than 450 in use in California alone. These wheels are made from a foot to 6 feet in diameter, from 10 to 1000 horse power, and adapted to all heads and purposes. Descriptive circulars mailed free on application.



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The above cut illustrates the improved form of Hydraulic Giants, in which the Center Bolt is dispensed with, which was so liable to catch trash. Prices and catalogues of our specialties sent free on application.

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MINING MACHINERY AND SUPPLIES, ENGINES AND BOILERS

ROPP STRAIGHT LINE FURNACE

FOR ROASTING, CHLORINATING, AND DESULPHURIZING ORES.

Knowles Steam Pumps      Lidgerwood Hoisting Engines  
Dodge Rock Breakers and Pulverizers  
Ingersoll-Sergeant Rock Drills and Air Compressors  
Wood Working, Iron Working and Saw Mill Machinery.